

## CHECKLIST TO DESIGNATE AREAS OF EVALUATION FOR REQUESTS FOR PROPOSAL (RFP)

Research Administration Use Only

	REQUISITION NUMBER 2480	DUE DATE 7/16/18	TIME DUE Noon est
MDOT PROJECT MANAGER <b>Elise Feldpausch</b>	JOB NUMBER (JN)		CONTROL SECTION (CS)
DESCRIPTION <b>Evaluating New Technologies for Roads Program Initiatives in Safety and Efficiency- (ENTERPRISE) PHASE II</b>			
Check all items to be included in RFP		Provide only checked items below in proposal. When applicable, Best Value scoring criteria is listed separately in the RFP.	
Check the appropriate Tier in the box below			
<input type="checkbox"/> <b>TIER 1</b> (\$50,000-\$150,000)	<input checked="" type="checkbox"/> <b>TIER II</b> (\$150,000-\$1,000,000)	<input type="checkbox"/> <b>TIER III</b> (>\$1,000,000)	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Understanding of Service
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Past Performance
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Qualifications of Team
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Quality Assurance/Quality Control
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>Location:</b> The percentage of work performed in Michigan will be used for all selections unless the project is for on-site inspection or survey activities, then location should be scored using the distance from the consultant office to the on-site inspection or survey activity.
N/A	N/A	<input type="checkbox"/>	Presentation
N/A	N/A	<input type="checkbox"/>	Technical Proposal (if Presentation is required)

The prime consultant can be a private or public university or business. The prime consultant/vendor is responsible for the successful completion of the service and is expected to perform at least 40 percent of the services, by dollar value. The basis of payment is Actual Costs for Universities and Actual Costs plus Fixed Fee for Consultants as defined in standard MDOT contracts.

To submit a proposal, please follow the [MDOT Consultant Vendor Selection Guidelines for Research Administration- Revised April 2017](#).

### RFP SPECIFIC INFORMATION

Problem Title: Evaluating New Technologies for Roads Program Initiatives in Safety and Efficiency-  
(ENTERPRISE)PHASE II

OR Number: OR17-101A

This is Best Value Selection which means the budget amount submitted with the proposal is a component of the proposal score, not the determining factor of the selection.

## PROPOSAL SUBMITTAL INFORMATION

### PROPOSAL AND BID SHEET EMAIL ADDRESS –

[mdot-rfp-response@michigan.gov](mailto:mdot-rfp-response@michigan.gov)

## GENERAL INFORMATION

Any questions relative to the Research Problem Statement must be submitted by e-mail to:

[mdot-research@michigan.gov](mailto:mdot-research@michigan.gov). Questions must be received at least five (5) working days prior to the due date and time specified above. All questions and answers will be placed on the MDOT RFP Web site as soon as possible after receipt of the questions and at least three (3) days prior to the due date listed above. The names of organizations submitting questions will not be disclosed.

MDOT is an equal opportunity employer and MDOT DBE firms are encouraged to apply. The participating DBE firm, as currently certified by MDOT's Office of Equal Opportunity, shall be listed in the Proposal.

### MDOT AND RESEARCH FORMS REQUIRED AS PART OF PROPOSAL SUBMISSION:

5100D- Request for Proposal Cover Sheet

Schedule of Research Activities Form- Appendix B

Deliverables Table- Appendix A

5100J- Consultant Data and Presignature sheet is required for signatory on this proposal

Research Proposal Budget Form Worksheet Appendix C (Universities)

Or

Budget Exhibits required in [Priced Proposal Guidelines](#) (Consultants)

## **FINANCIAL REQUIREMENTS FOR NON-PREQUALIFIED VENDORS**

[http://www.michigan.gov/documents/mdot/Financial\\_Requirements\\_for\\_Non\\_Prequalified\\_Vendors\\_605817\\_7.pdf](http://www.michigan.gov/documents/mdot/Financial_Requirements_for_Non_Prequalified_Vendors_605817_7.pdf)

## **E-VERIFY REQUIREMENTS**

E-Verify is an Internet based system that allows an employer, using information reported on an employee's Form I-9, Employment Eligibility Verification, to determine the eligibility of that employee to work in the United States. There is no charge to employers to use E-Verify. The E-Verify system is operated by the Department of Homeland Security (DHS) in partnership with the Social Security Administration. E-Verify is available in Spanish.

The State of Michigan is requiring, under Public Act 200 of 2012, Section 381, that as a condition of each contract or subcontract for construction, maintenance, or engineering services that the pre-qualified contractor or subcontractor agree to use the E-Verify system to verify that all persons hired during the contract term by the contractor or subcontractor are legally present and authorized to work in the United States.

Information on registration for and use of the E-Verify program can be obtained via the Internet at the DHS Web site: <http://www.dhs.gov/E-Verify>.

The documentation supporting the usage of the E-Verify system must be maintained by each consultant and be made available to MDOT upon request.

It is the responsibility of the prime consultant to include the E-Verify requirement documented in this NOTIFICATION in all tiers of subcontracts.

## **DIGITAL SIGNATURE OF CONTRACTS**

On **January 1, 2018**, Contract Services Division intends to fully implement the use of CoSign as the exclusive software for digitally signing all consultant contracts and consultant contract related documents. All other digital signing methods will no longer be accepted.

Prior to using CoSign, all external partners must apply for a free digital signature user account by submitting a [MDOT Digital Signature Certificate Request Form](#).

**2017 Insurance Update – MDOT**  
**3.9.17**

At a minimum, the insurance types and limits identified below, may be required from the selected consultant, prior to contract award.

Required Limits	Additional Requirements
<b>Commercial General Liability Insurance</b>	
<u>Minimal Limits:</u> \$1,000,000 Each Occurrence Limit \$1,000,000 Personal & Advertising Injury Limit \$2,000,000 General Aggregate Limit \$2,000,000 Products/Completed Operations	Consultants must have their policy endorsed to add "the State of Michigan, its departments, divisions, agencies, offices, commissions, officers, employees, and agents" as additional insureds
<b>Automobile Liability Insurance</b>	
<u>Minimal Limits:</u> \$1,000,000 Per Occurrence	
<b>Workers' Compensation Insurance</b>	
<u>Minimal Limits:</u> Coverage according to applicable laws governing work activities.	Waiver of subrogation, except where waiver is prohibited by law.
<b>Employers Liability Insurance</b>	
<u>Minimal Limits:</u> \$500,000 Each Accident \$500,000 Each Employee by Disease \$500,000 Aggregate Disease	
<b>Professional Liability (Errors and Omissions) Insurance</b>	
<u>Minimal Limits:</u> \$1,000,000 <b>Per Claim</b>	

The Insurer shall provide at least thirty (30) days written notice of cancellation. The Prime Consultant will be responsible to verify subconsultant(s) compliance with MDOT's insurance requirements.

# Michigan Department of Transportation

## SCOPE OF SERVICE FOR RESEARCH SERVICES

**TITLE:** Evaluating New Technologies for Roads Program Initiatives in Safety and Efficiency-  
(ENTERPRISE)PHASE II  
**OR#:** OR17-101A

**LOCATION:** Statewide

**WORK DESCRIPTION:** Research on Evaluating New Technologies for Roads Program Initiatives in Safety and Efficiency- (ENTERPRISE)PHASE II

**ANTICIPATED START DATE:** 10/1/2018

**ANTICIPATED COMPLETION DATE:** 1/30/2021

The budget for this project cannot exceed \$531,000.00

### **MDOT RESEARCH PROJECT ADMINISTRATION MANAGER:**

**Elise Feldpausch**  
8885 Ricks Road  
Lansing, Michigan 48909  
E-MAIL: [mdot-research@michigan.gov](mailto:mdot-research@michigan.gov)

### **GENERAL INFORMATION:**

#### 1. PROBLEM TO ADDRESS

Michigan DOT and partner states in this ENTERPRISE pooled fund study have identified 11 research projects to address specific objectives of their agencies related to ITS systems, devices and procedures. These objectives are listed in priority order below in two tiers: Primary (1-5), projects expected to begin in 2018; and Secondary (6-11), projects expected to begin in 2019-2020. Secondary projects may be further developed or amended to reflect future research needs. In their response to this RFP prospective consultants are asked to present detailed project proposals for the five Primary projects and brief proposal outlines for the six Secondary projects.

Qualifications must be demonstrated for undertaking all 11 projects. The first three Primary projects must begin upon the date of receipt of the "Notice to Proceed." The remaining two Primary projects must begin within 4 months of the date of receipt of the "Notice to Proceed.". Proposals must be prepared in accordance with Michigan DOT's "Consultant/Vendor Selection Guidelines for Research Service Contracts," April 2017.

Primary Projects - Objectives to be addressed in detail in the consultant's proposal

1. Evolution of ITS in Asset Management
2. Phasing out Legacy ITS Systems/Devices
3. Real-Time Integration of Arrow Board Messages into Traveler Information Systems - Phase III
4. Update of Rural Intersection Conflict Warning System (RICWS) Materials Developed in Phases I-III
5. ITS Infrastructure Integration into Digital Mobility as a Service (MaaS)

Secondary Projects - Objectives to be briefly addressed in the consultant's proposal

6. Capability and Usage Guidelines for Color Changeable Message Signs.
7. Crash Modification Factors (CMFs) for ITS devices
8. Future of Unmanned Aerial Systems (UASs) within ITS as a Platform
9. Maintenance of ITS in Rural Areas
10. Shared Use of Connected Vehicle Roadside Units
11. Use Cases and Benefits of Active Traffic Management (ATM) Strategies

## 2. RESEARCH OBJECTIVES

Objectives are listed with tasks under the Consultant Responsibilities section of this document.

### 3. URGENCY AND IMPLEMENTATION BENEFIT TO MDOT

Michigan DOT and the other members of the pooled fund expect to be able to use the results of these research projects to advance ITS practice within their agencies. Proposers are required to submit an implementation plan with their proposals that outlines likely implementation steps. Proposers will also be asked to include a revised implementation plan, tied to actual research results, as part of the draft final report for each project.

Proposers should identify anticipated benefits to pooled fund members from implementing research results, along with suggested methods for measuring the benefits, both quantitative and qualitative

### 4. RISKS OR OBSTACLES TO RESEARCH

ITS systems are rapidly evolving, often driven by private-sector innovation. Proposers need to focus on developing practical avenues for state agencies to make near-term use of ITS systems to improve operations and mobility while remaining flexible to adopt improved systems as they become available.

### 5. DESIRED QUALIFICATIONS IN AN INVESTIGATOR(S)

There is no statistical qualification requirement for this proposal.

## **CONSULTANT RESPONSIBILITIES:**

Primary Projects - Objectives to be addressed in detail in the consultant's proposal.

Michigan DOT and the other ENTERPRISE pooled fund members have identified the following tasks for each of the five Primary projects in this RFP. Proposers should present in detail their understanding of each research objective and their detailed research plan to accomplish it. The tasks listed under each project are intended to provide a sense of the ENTERPRISE members' expectations while encouraging proposers to present their insights on how best to achieve the objectives. Proposers are expected to present research plans that can be accomplished within the available funds and contract time with sufficient opportunity for ENTERPRISE members to review and comment on the progress and interim deliverables of the research. ENTERPRISE members are looking for practical, implementable findings and recommendations. All projects are expected to be completed within 24 months from the date of receipt of the "Notice to Proceed". Research Objectives are above each research task listed below.

#### 1. Evolution of ITS in-Asset Management – Available funds: \$40,000

##### Objective:

Gather current practices among state and local transportation agencies for identifying and categorizing ITS devices in terms of location, function, condition, ownership and other attributes. Identify asset management systems being used, or capable of being used, for ITS devices.

Tasks:

- a) Conduct a literature search, survey and interviews to identify effective asset management approaches, methods and devices, and aggregated devices that comprise services (aggregation of tools to provide a service, like travel time, roadway monitoring, current road conditions reporting, etc.).
- b) Identify and document the estimated lifecycle of the individual devices and aggregated devices that comprise traveler information services based on anticipated MaaS (Mobility as a Service). Differentiate lifecycle estimates between devices that may be served by multiple communications media versus a single network.
- c) Identify, document and prioritize the elements or criteria (e.g. device obsolescence, safety, customer demand, future readiness, etc.) that an asset management system should use.
- d) Present findings in a webinar aimed at state DOT practitioners.
- e) Summarize research tasks, findings, recommendations in a draft final report.
- f) Incorporate ENTERPRISE comments and revisions in final report.

2. Phasing out Legacy ITS Systems/Devices – Available funds: \$75,000

Objective:

Develop approaches, methods, criteria and tools for identifying and phasing out, or repurposing, ITS devices and systems that are no longer needed or effective for their intended purpose; for example, highway advisory radio or parts of 511 traveler information systems. Distinguish between services that may still be needed/desired by the public and devices that may be obsolete.

Tasks:

- a) Conduct a literature search, survey and interviews to identify effective approaches, methods, criteria and tools for determining what is obsolete and should be phased out/repurposed.
- b) Document case studies representing a range of approaches in terms of the number and kind of devices/systems identified for phase-out/repurposing.
- c) Recommend or develop phase-out/repurposing criteria and/or tools suitable for use by state DOTs.
- d) Present findings and tools in a webinar aimed at state DOT practitioners.
- e) Summarize research tasks, findings and recommendations in a draft final report.
- f) Incorporate ENTERPRISE comments and revisions in final report.

3. Real-Time Integration of Arrow Board Messages into Traveler Information Systems, Phase III – Available funds: \$75,000

Objective:

Building on two previous ENTERPRISE projects that developed a concept of operations and requirements (Phase I) and installed and demonstrated a system (Phase II) (see [http://enterprise.prog.org/projects\\_completed.html](http://enterprise.prog.org/projects_completed.html)), conduct a Phase III evaluation of systems deployed in Minnesota and other states.



Tasks:

- a) Identify up to four ENTERPRISE agencies that have deployed systems that integrate arrow board messages into their traveler information systems.
- b) Document the engineering, hardware and software similarities and differences among the identified systems.
- c) Propose system evaluation criteria based on those envisioned in Phases I and II; obtain and incorporate input from ENTERPRISE agencies.
- d) Apply evaluation criteria and assess strengths, weaknesses, benefits and costs.
- e) Summarize research tasks, findings and recommendations in a draft final report
- f) Incorporate ENTERPRISE comments and revisions in final report.

4. Update of Rural Intersection Conflict Warning System (RICWS) Materials Developed in Phases I-III – Available funds: \$35,000

Objective:

Identify issues associated with development and deployment of next-generation approaches to RICWS, including technology, design, construction, operation, maintenance, standards and public outreach. This update will build on three previous ENTERPRISE projects on the subject (see [http://enterprise.prog.org/projects\\_completed.html](http://enterprise.prog.org/projects_completed.html)).

Tasks:

- a) Review research and deliverables from ENTERPRISE Phases I-III, the last phase of which was completed in 2015, and identify potential issues and questions to be addressed in developing next-generation systems.
- b) Conduct a literature search, survey and interviews of ENTERPRISE member states and others with significant RICWS deployments to identify further issues and questions to be addressed.
- c) Develop a matrix of issues and potential research approaches for addressing them as a roadmap to development of next generation systems for reducing crashes at rural intersections.
- d) Facilitate a webinar with interested agencies to review the matrix and fine-tune the roadmap.
- e) Summarize research tasks, findings and recommendations in a draft final report
- f) Incorporate ENTERPRISE comments and revisions in final report.

5. ITS Infrastructure Integration or Digital Mobility as a Service (MaaS) – Available funds: \$60,000

Objective:

Identify those ITS devices and systems that may be impacted by or contribute to developing systems for connected and automated vehicles (CAV). Explore common goals, uses and opportunities in the pursuit of mobility as a service (MaaS).

Tasks:

- a) Review state of the practice of traditional ITS devices and systems and current developments in the CAV world; identify overlaps, commonalities and opportunities related to technology, engineering, vendors and state DOT transportation systems management and operations (TSMO).
- b) Prepare a discussion document summarizing the results of Task a, identifying key issues, scenarios and opportunities.
- c) Facilitate a workshop for thought leaders at state DOTs and federal agencies to discuss the implications of evolving CAV systems for traditional ITS systems and devices.
- d) Summarize workshop discussions, conclusions and recommendations for state DOT TSMO personnel in the next three years.
- e) Prepare a draft final report summarizing all tasks.
- f) Incorporate ENTERPRISE comments and revisions in final report.

Secondary Projects - Objectives to be briefly addressed in the consultant's proposal. However, the expertise and capacity to take on these projects must be demonstrated.

6. Capability and Usage Guidelines for Color Changeable Message Signs – Available funds: \$5,000

Objective:

Collaborate with the Transportation Management Center Pooled Fund Study, TPF-5(319), on their funded project on this topic: <https://tmcdfs.ops.fhwa.dot.gov/projects/guidecms.htm>. The scope for this project is being developed, with research completion targeted for December 2019. Request that Enterprise member Shari Hilliard (Kansas) provide input on the deliverables and attend panel meetings.

7. Crash Modification Factors (CMFs) for ITS devices – Available funds: \$50,000

Objective:

Building on FHWA research on ITS Work Zones Case Studies and Assessments (<https://ops.fhwa.dot.gov/wz/its/>), develop a tool for state DOTs to calculate the safety crash modification factors for their deployed work zone ITS devices.

8. Future of Unmanned Aerial Systems (UASs) within ITS as a Platform – Available funds: \$80,000

Objective:

Perform a literature search and survey on current state DOT and municipality use of UASs on highway corridors for such purposes as traffic monitoring, incident reporting and reporting, etc.

#### 9. Maintenance of ITS in Rural Areas – Available funds: \$80,000

**Objective:**

Perform a literature search and survey documenting state DOT practices and strategies to reduce costs related to maintaining ITS devices/systems in rural areas. Include review of current and alternative (solar) power sources for devices. Obtain input from private-sector manufacturers of power sources.

#### 10. Shared Use of Connected Vehicle Roadside Units – Available funds: \$25,000

**Objective:**

Coordinate study in two or more states of the shared use between state and local authorities of RSUs for connected vehicle applications. Include considerations for both hardware and data sharing. Document partnering processes, challenges and benefits.

#### 11. Use Cases and Benefits of Active Traffic Management (ATM) Strategies – Available funds: \$6,000

**Objective:**

Collaborate with the Connected Vehicle Pooled Fund Study, TPF-5(206), to identify the overlap of vehicle infrastructure integration (VII) standards and technology with ATM strategies. How can states deploy ATM strategies using developing VII?

Failure of any of the above will be found in noncompliance with the contract.

### **DELIVERABLES:**

Each research project in this RFP should yield actionable data, information, recommendations, sample procedures, software (where applicable) and a clear concise report that can be readily implemented by member agencies.

### **MDOT RESPONSIBILITIES:**

Michigan DOT and other member agencies are eager to participate in the selected proposer's research through sharing of information, data and practices, and by conducting pilot deployments of deliverables.

### **COORDINATION PROCEDURES**

Work will be completed in compliance with the Research Implementation Manual

## **CONSULTANT PAYMENT**

All billings for services must be directed to the Department and follow the current Research Implementation Manual. This document contains instructions and forms that must be followed and used for billing. Payment may be delayed or decreased if the instructions are not followed.

Payment to the Consultant for services rendered shall not exceed the maximum amount unless an increase is approved in accordance with the contract with the Consultant.

Direct expenses, if applicable, will not be paid in excess of that allowed by the Department for its own employees in accordance with the State of Michigan's Standardized Travel Regulations. Supporting documentation must be submitted with the billing for all eligible expenses on the project in accordance with the Reimbursement Guidelines. The only hours that will be considered allowable charges for this contract are those that are directly attributable to the activities of this project.

The use of overtime hours is not acceptable unless prior written approval is granted by the MDOT project manager. Reimbursement for overtime hours that are allowed will be limited to time spent on this project in excess of forty hours per person per week. Any variations to this rule should be included in the priced proposal submitted by the Consultant and must have prior written approval by the MDOT project manager.

The basis of payment is Actual Costs for Universities and Actual Costs plus Fixed Fee for Consultants as defined in standard MDOT contracts.

## **PROPOSAL INFORMATION AND SCORING**

Formal proposals are required and shall include the information as outlined in these Guidelines. This section is the information required in the proposal that will be used to score the qualifications of each consultant's proposal. The section numbering correlates to the score sheet. Therefore, the consultant should format their proposals consistent with the outline provided.

### **1. UNDERSTANDING OF SERVICE: 40 POINTS**

Describe understanding of the service intended to be proposed. This information is to be based on the scope of services.

**Problem Statement and Background Summary-** demonstrates good understanding of problem, looks objectively at problem, specifies problem limits and restricts scope appropriately, and cites relevant literature.

**Research Plan-** cites specific objectives clearly, technical approach responds to all written and implied requirements, difficult areas are identified and details to overcome are given, represents novel idea or technical approach, plan is feasible, and effort is consistent with scope of problem.

**Products and Implementation-** proposal clearly defines products to be delivered at completion, includes practical, realistic implementation plan.

**MDOT Involvement-** MDOT involvement is not excessive and is clearly defined and quantified.

### **2. QUALIFICATIONS OF TEAM: 30 POINTS**

Describe the structure of the project team including the roles of all key personnel and subcontractors. For each subcontractor describe role in service and include what percent of the task that the subcontractor is expected to provide. Provide résumés for each of the key staff of the prime and subcontractor.

**Facilities-** proposer has adequate access to equipment and/or laboratory required in study.

**Staffing-** personnel availability is clearly defined, shows a depth of qualified personnel, proposer has ability to manage a project of this size and sufficient resources to complete study, qualifications are directly related to the requirements of the project, plans for specific key personnel assignment included, and there is a reasonable balance between subcontractor and prime contractor.

**Statistical Qualification-** The required knowledge level for a research team in statistical analyses, if defined, will be in the RFP under the heading DESIRED QUALIFICATIONS IN AN INVESTIGATOR(S).

Proposals not documenting statistical training and experience levels required in the RFP may be classified as non-responsive.

### **3. RELEVANT PAST PERFORMANCE: 30 POINTS**

Past performance project scores will be reviewed and/or past project references will be contacted.

**Record of past accomplishment-** proposer satisfactorily completed past projects, was cooperative and flexible, and ended past projects according to the original budget and time schedule.

**4. QUALITY ASSURANCE/QUALITY CONTROL (QAQC) PLAN: 5 POINTS**

The proposer provided an outline of a QA/QC process. The QA/QC Manager is experienced with MDOT standards and practices.

**5. LOCATION: 5 POINTS**

The percentage of work hours performed in Michigan will be used for all selections unless the project is for on-site inspection or survey activity. The combination of location and percentage of work performed in Michigan should not exceed 5 points.

Percentage of Work To Be Done in Michigan Score	
95% to 100%	5
80% to 94%	4
50% to 79%	3
25% to 49%	2
10% to 24%	1
Less than 10%	0

**6. PRICE: 40 POINTS**

Cost score is based on the lowest cost proposed divided by the current proposer cost multiplied by 40. Lowest bid shall receive 40 points.

**TOTAL POINTS: 150**

Research Proposal Budget Form Worksheet														
Project Title														
Research Organization														
Date														
										FY1	FY2	FY3	FY4	TOTAL
<b>SALARIES &amp; WAGES -- MUST COMPLY WITH OMB CIRCULAR A-21</b>														
Specify number of hours to be worked and hourly rate for each individual below: Examples of role of individual are Principal Investigator, Technician, Grad Student, etc. Annual wage increases must not exceed 2%														
(role of individual)														
Name of individual														
Enter FY	FY1 rate	FY1 hrs	FY2 rate	FY2 hrs	FY3 rate	FY3 hrs	FY4 rate	FY4 hrs						
rate & hrs									\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
(role of individual)														
Name of individual														
Enter FY	FY1 rate	FY1 hrs	FY2 rate	FY2 hrs	FY3 rate	FY3 hrs	FY4 rate	FY4 hrs						
rate & hrs									\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
(role of individual)														
Name of individual														
Enter FY	FY1 rate	FY1 hrs	FY2 rate	FY2 hrs	FY3 rate	FY3 hrs	FY4 rate	FY4 hrs						
rate & hrs									\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
(role of individual)														
Name of individual														
Enter FY	FY1 rate	FY1 hrs	FY2 rate	FY2 hrs	FY3 rate	FY3 hrs	FY4 rate	FY4 hrs						
rate & hrs									\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
(role of individual)														
Name of individual														
Enter FY	FY1 rate	FY1 hrs	FY2 rate	FY2 hrs	FY3 rate	FY3 hrs	FY4 rate	FY4 hrs						
rate & hrs									\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
(role of individual)														
Name of individual														
Enter FY	FY1 rate	FY1 hrs	FY2 rate	FY2 hrs	FY3 rate	FY3 hrs	FY4 rate	FY4 hrs						
rate & hrs									\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
(role of individual)														
Name of individual														
Enter FY	FY1 rate	FY1 hrs	FY2 rate	FY2 hrs	FY3 rate	FY3 hrs	FY4 rate	FY4 hrs						
rate & hrs									\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
(role of individual)														
Name of individual														
Enter FY	FY1 rate	FY1 hrs	FY2 rate	FY2 hrs	FY3 rate	FY3 hrs	FY4 rate	FY4 hrs						
rate & hrs									\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
<b>Sub-Total Salary &amp; Wages</b>										\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

FRINGE BENEFITS -- MUST COMPLY WITH OMB CIRCULAR A-21									
Indicate Employee, appropriate negotiated rate for each and description of who the rate applies to. ( e.g. - Sam Smith, 25%, Summer Faculty. The rate is negotiated between the university and it's cognizant agency									
Name									
(Rate Description)									
( % rate)	FY1	FY2	FY3	FY4	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Name									
(Rate Description)									
( % rate)	FY1	FY2	FY3	FY4	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Name									
(Rate Description)									
( % rate)	FY1	FY2	FY3	FY4	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Name									
(Rate Description)									
( % rate)	FY1	FY2	FY3	FY4	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Name									
(Rate Description)									
( % rate)	FY1	FY2	FY3	FY4	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Name									
(Rate Description)									
( % rate)	FY1	FY2	FY3	FY4	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Name									
(Rate Description)									
( % rate)	FY1	FY2	FY3	FY4	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Name									
(Rate Description)									
( % rate)	FY1	FY2	FY3	FY4	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
<b>Sub-Total Fringe Benefits</b>					\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
<b>SUBCONTRACTOR -- MUST COMPLY WITH OMB CIRCULAR A-21</b>									
A copy of the subcontractor's budget must be attached. An MDOT approved subcontract is required for subcontractor costs in excess of \$25,000 prior to payment of invoices that contain subcontractor work. List all subcontractors on a separate line.									
Subcontractor Name & Amt.									\$0.00
Subcontractor Name & Amt.									\$0.00
<b>Sub-Total Subcontractor</b>					\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
<b>TRAVEL -- MUST COMPLY WITH OMB CIRCULAR A-21</b>									
Must be in accordance with IDS contract requirements.									
In-State Travel (Destinations within Michigan)									
Provide a separate table itemizing costs.									\$0.00
Out-of-State Travel (Prior approval required)									
Provide a separate table itemizing costs.									\$0.00
<b>Sub-Total Travel</b>					\$0.00	\$0.00	\$0.00	\$0.00	\$0.00



**SUPPLIES -- MUST COMPLY WITH OMB CIRCULAR A-21** (Few items not allowed are: computers, printers, monitors, fax machines, printer paper, toner cartridges, pens, pencils, legal pads, clips, rubber bands, post-it notes, books, notebooks, binders, folders, diskettes, postage stamps, chairs, office furniture, calendars, paper punches, business cards, staplers, waste cans, etc.)

Provide details if cost exceeds \$2,000. Individual line items in excess of \$1,000 require a detailed explanation regardless of total cost

(Description)						\$0.00
(Description)						\$0.00
(Description)						\$0.00
(Description)						\$0.00
(Description)						\$0.00
(Description)						\$0.00
(Description)						\$0.00
<b>Sub-Total Supplies</b>		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

**CAPITAL EQUIPMENT -- MUST COMPLY WITH OMB CIRCULAR A-21 - Purchased specifically for this project**

List items with a value in excess of \$500. Equipment in excess of \$5,000 requires prior approval.

(Description)						\$0.00
(Description)						\$0.00
(Description)						\$0.00
(Description)						\$0.00
(Description)						\$0.00
(Description)						\$0.00
(Description)						\$0.00
(Description)						\$0.00
<b>Sub-Total Equipment</b>		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

**OTHER EXPENSES -- MUST COMPLY WITH OMB CIRCULAR A-21** (Few items not allowed are: memberships in professional & scientific organizations, local

telephone lines, cell phones, etc.) Any project expense which does not fall into another category. Provide detailed explanation of the expense and applicable breakdown of costs (e.g. graduate student tuition).

(Description)						\$0.00
(Description)						\$0.00
(Description)						\$0.00
(Description)						\$0.00
(Description)						\$0.00
<b>Sub-Total Other Expenses</b>		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

**Total Sub-Totals** \$0.00 \$0.00 \$0.00 \$0.00 \$0.00

**INDIRECT COSTS -- MUST COMPLY WITH OMB CIRCULAR A-21**

Indirect cost rates are negotiated between the university and it's cognizant agency. Indicate the type of negotiated indirect rate used and the percentage (e.g. On Campus Research, 52%)

(Type)		( % )								
	FY1	FY2	FY3	FY4						
Enter \$ Amt per FY						\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
<b>Total Indirect Costs</b>						\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

<b>TOTAL PROJECT COSTS</b>	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
<b>UNIVERSITY MATCHING FUNDS</b>					\$0.00
<b>TOTAL MDOT PROJECT COSTS</b>	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00